to thoracoplasty. The result was satisfaction with thoracoplasty in the groups for which it had been used.

One by-product of this thoracoplasty study was observance of the high rate of conversion of pulmonary secretions following thoracoplasty. This is of importance particularly when trying to decide when certain thoracoplasties must be regarded as failures. Of 187 patients whose pulmonary secretions converted from positive to negative on culture following thoracoplasty, the time of conversion was as follows: By the end of six months, 89 (47.5 per cent); between six months and one year, 30 (16 per cent); between one year and two years, 33 (17.7 per cent); between two years and three years, 20 (10.7 per cent); over three years, 15 (8.1 per cent). These figures would seem to justify a conservative attitude in regard to pulmonary resection following thoracoplasty unless, of course, there is obvious cavitation or bronchial disease present.

Open Pneumonolysis in the Treatment of Tuberculosis

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OPEN pneumonolysis is the severance of adhesions through incision and exposure of the pleura in the course of artificial pneumothorax. It is used in cases in which the severance cannot be accomplished by closed pneumonolysis.

This surgical procedure is rarely indicated since, if the adhesions are too extensive, or the space too small for the successful manipulation of instruments in closed lysis, it is usually better to expand the lung and carry out thoracoplasty or some other surgical procedure.

However, there are individual cases in which open lysis may be a life-saving measure. This is particularly true in cases in which massive hemorrhage occurs during intrapleural pneumonolysis.

At Olive View Sanatorium, open pneumonolysis was first done in 1937. The last such operation was carried out in 1947. There was a span of years in which the operation was not used. At first the operation was employed in cases of bilateral disease in an attempt to get the disease in one lung under control before the other was collapsed. Now the operation is considered indicated only in the event of hemorrhage during intrapleural lysis — an infrequent occurrence.

CASE REPORTS

CASE 1: A 24-year-old male had pneumothorax on the right with adhesions, and there was a small cavity in the left apex. Pneumonolysis was tried and failed, so open lysis was done and all adhesions cut. Complete collapse followed, but gradually enough expansion developed so that contralateral pneumothorax was given and the patient was discharged a year later with pneumothorax on both sides. He is still living and well.

CASE 2: A 39-year-old diabetic patient, admitted January 22, 1945, had closed lysis on June 10, 1945, and open lysis July 30, 1945.

This patient had a mid-lung cavity. Pneumothorax was tried. The cavity closed a little, but fluid accumulated.

Closed pneumonolysis was not successful, so open lysis was done and the patient went home with the cavity closed. However, an x-ray film of April 23, 1946, indicated that pneumothorax might have to be discontinued.

CASE 3: A 30-year-old male was admitted with bilateral disease in September 1945. Right artificial pneumothorax was started on July 3, 1946. Closed intrapleural pneumonolysis, attempted in December 1946, was not feasible, so open lysis was done in January 1947. This was followed by repeated aspirations of bloody fluid until none was obtainable.

A left pneumothorax was started six months later, and the patient left the sanitarium in 1949 with the disease quiescent and sputum negative for tubercle bacilli. One hour of exercise daily was permitted before discharge, but exertion caused dyspnea. Decortication probably should have been done.

CASE 4: A 40-year-old female was admitted in 1941 and discharged in 1946. The patient had ulcerative tuberculous tracheobronchitis. Bronchoscopy was done repeatedly. The condition cleared in 1945 and right pneumothorax was started. Eight months later, closed intrapleural pneumonolysis was done. Two months later in another attempt at lysis, arterial bleeding which could not be controlled developed. The chest then was opened, the bleeding vessel was tied, and adhesions were severed. A little fluid accumulated, then cleared. At the time of discharge, the sputum had been negative for tubercle bacilli for over a year; pneumothorax was still in effect.

If cutting an adhesion is not feasible on thoracoscopy, then it is wise, if possible to expand the lung and try some other form of collapse.

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